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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/240,265	01/29/1999	MARK E. PETERS	CR9-98-095	7166

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EXAMINER	
CALLAHAN, PAUL E	

ART UNIT	PAPER NUMBER
2137	

NOTIFICATION DATE	DELIVERY MODE
08/22/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

RSWIPLAW@us.ibm.com

Office Action Summary	Application No.	Applicant(s)	
	09/240,265	PETERS, MARK E.	
	Examiner	Art Unit	
	Paul Callahan	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7-3-2000*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-12 are pending in this application and have been examined.

Response to Arguments

2. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-3 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Changes have been made via the latest amendment to the language of claim 1 by the addition of language directed towards execution on computer apparatus. However it is not clear from the language of the claims how the X.509 certificate can be considered as executable code capable of causing a change in a computer apparatus. The X.509 certificate is in fact mere data that another program may act upon when it is read out from the memory medium. Claims 1-3 claim data, which is nonfunctional descriptive material. As such, embodying the data on a computer-readable would not make the claims statutory without language directed to read-out and execution of computer code so as to cause a

computing device to execute the steps coded for. See MPEP 706.03(a) and, especially, 2106 IV B 1 (b).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shambroom (5923756) and Housley et al., Internet SX.509 Public Key Infrastructure Certificate and CRL Profile, Network Working Group, Request for Comments 2459.

As for claim 1, in lines 32-35 of column 10, Shambroom discusses a certificate that includes a public key and list of one or more cryptographic algorithms supported by the entity associated with the public key. The certificate can resemble an X.509 certificate. On pages 574 and 575, Housley describes the X.509 certificate V3 in sec. 3.1. As can be seen the certificate includes a section (certificate extension) that identifies the algorithm, parameters, and a public key. There is also a section for a signature. These read on the first clause of applicant's first claim as amended. The list of algorithms disclosed in Shambroom also anticipates an extension for identifying at least one alternative

algorithm. In addition, Housley also teaches the use of alternative algorithms in Sec. 4.2 Certificate Extensions, particularly in sec. 4.2.1.1 Authority Key Identifier and sec. 4.1.1.2 Subject Key Identifier. In these two sections and in sec. 7.2 Signature Algorithms and 7.3 Subject Public Key Algorithms Housley teaches that the subject key and the signing authority key may individually be any algorithm type. Shambroom does not dictate that a second public key and signature therefore be included in the certificate or used as an alternative means of protecting data included within the certificate. However Housley does explicitly teach this (certificate extension) feature in Sections 7.2 and 7.3. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to configure an X.509 certificate to utilize alternative signatures formed with different algorithms on data contained within the certificate as taught by Housley, thereby protecting the data from compromise. It would have been desirable to do so since utilization of alternative algorithms would increase the difficulty in unauthorized access to the protected data within the certificate.

As for claim 3, both of the signatures taught by the combination of Shambroom, and Housley can verify at least part of the certificate, as is taught for example at 4.1.2.5 of Housley.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shambroom and Housley, and further in view of Schneier: Applied Cryptography 2nd Edition.

As for claim 2, the combination of Shambroom and Housley fails to teach a first and second alternative algorithm that are RSA and elliptic curve respectively. However, Housley does teach that the subject key and signing key may be any algorithm, and Schneier, teaches the use of RSA public key algorithms beginning on page 17, and teaches elliptic curve public key systems on pages 480-481. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to support RSA and an elliptic curve cryptosystem with the X.509 certificate taught by Shambroom and Housley. It would have been desirable to do so as this would allow for tailoring the computational workload for the signer and recipient of the certificate and thereby increase the utility of the system. Housley teaches the use of non-critical certificate extensions in sec. 4.2 certificate extensions.

8. Claims 4-12 contain claims directed towards: a method of using the certificate of claims 1-3, a system for employing the certificate of claims 1-3, and a computer program product that directs a system to utilize the certificate of claims 1-3. Claims 4-12 recite substantially the same limitations as do claims 1-3, and are therefore rejected on the same grounds as are those claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-3869. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Emmanuel Moise, can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Paul E. Callahan/
August 9, 2007

EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER